

Title (en)  
Ruggedized switchable glazing, and/or method of making the same

Title (de)  
Robuste abblendbare Verglasung bzw. Herstellungsverfahren dafür

Title (fr)  
Vitrage commutable renforcé et/ou son procédé de fabrication

Publication  
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Application  
**EP 09153026 A 20090217**

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Abstract (en)  
Certain example embodiments of this invention relate to ruggedized switchable glazings, and/or methods of making the same. The PDLC stack of certain example embodiments includes an outer substrate, a low-E UV blocking coating deposited on an inner surface of the outer substrate, a first PVB or EVA laminate, a first PET layer, a first TCO layer, the PDLC layer, a second TCO layer, a second PET layer, a second PVB or EVA laminate, and an inner substrate. The substrates may be glass substrates. The low-E UV blocking coating may include at least two layers of or including silver and/or may include one or more IR layers. Thus, certain example embodiments may advantageously reduce one or more problems associated with residual haze, color change, flicker, structural changes in the polymer and/or the LC, degradations in state-switching response times, delamination, etc. The PDLC stack of certain example embodiments may be used in connection with any form of coated article, such as, for example, windows, windshields, IG units, etc.

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Citation (applicant)  
• US 7056588 B2 20060606 - NEUMAN GEORGE [US], et al  
• US 6887575 B2 20050503 - NEUMAN GEORGE [US], et al  
• US 28159805 A 20051118  
• US 6596399 B2 20030722 - VEERASAMY VIJAYEN S [US]  
• US 7198851 B2 20070403 - LEMMER JEAN-MARC [LU], et al  
• US 7189458 B2 20070313 - FERREIRA JOSE [LU], et al  
• US 2005164015 A1 20050728 - LAIRD RONALD E [US], et al

Citation (search report)  
• [I] US 6055088 A 20000425 - FIX RENAUD [FR], et al  
• [A] US 5539552 A 19960723 - DESAI BHUPENDRARAI C [US], et al  
• [I] US 4883721 A 19891128 - NALEPKA RAYMOND [US], et al  
• [I] US 2003150711 A1 20030814 - LAIRD RONALD E [US]  
• [A] US 2006029815 A1 20060209 - WOODRUFF DANIEL P [US], et al  
• [A] US 5837361 A 19981117 - GLASER HANS [DE], et al  
• [A] US 4532181 A 19850730 - BRILL KLAUS [DE], et al

Cited by  
CN105334643A; CN107073887A; FR2965641A1; CN103238102A; US9547206B2; US11243421B2; US11474385B1; WO2012045973A1; WO2018195458A1; WO2018086400A1; US10866480B2; US11774825B2; US10968684B2; US9400411B2; US11360364B2; US11698562B2; US11325352B2; US11826986B2; US10705363B2; US10989945B2; US11111720B2; US11175523B2; US11448910B2; US11467439B2; US11681170B2; US11934055B2

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